

Biology's Dramatic Story ...So far!

by
Moxie

There is a reason why people walk down the street with their eyes glued to their cell phones. They want to find out the latest news! It is indeed true that everyone is curious and likes a good story, and especially the ending to a good story. Many stories however actually are never ending. They may start in a very simple fashion, but as time goes on, the details become more and more complicated.

Many stories or interpretations in science, for example, are like this. At first the idea is straightforward, but as more studies are conducted, the story becomes more difficult to follow. Consider, for example, Darwin's proposals about evolution. He observed that individuals in a population of organisms differed in various small details. He then argued that

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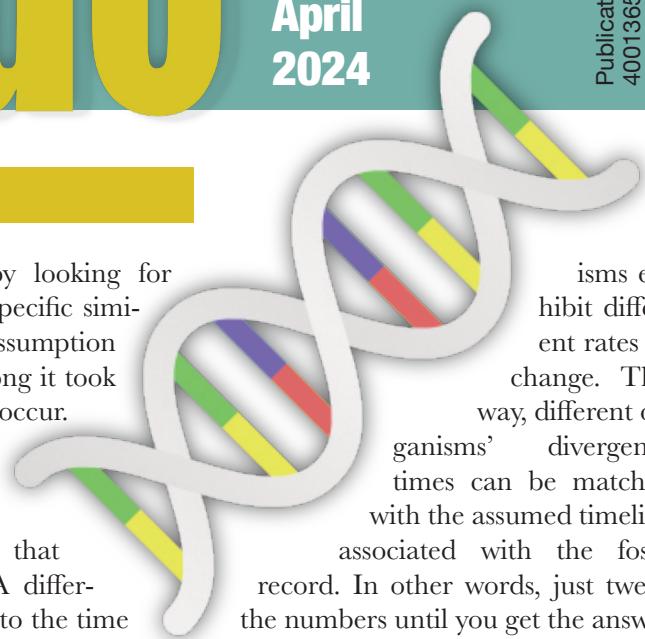


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Tick Tock Molecular Clocks

In recent years, people have become really interested in genetics. They ask questions like "Who were my ancestors? What can I learn about my family through our genes? What mix of nationalities do I have?" As the genomes of various species, including humans, have been mapped, scientists have reflected on many issues. One of those issues is molecular clocks.

The idea behind a molecular clock is that genomes of modern organisms

can be compared by looking for DNA differences in specific similar genes. Then an assumption is made about how long it took for the changes to occur. Further assumptions are that the organisms descended from a common ancestor, that the number of DNA differences is proportional to the time elapsed, and that the rate of

change was constant. However, the accuracy of molecular clocks has been questioned recently because molecular clock-based time estimates do not match fossil record-based estimates. To correct this discrepancy, it is proposed that different organ-

isms exhibit different rates of change. This way, different organisms' divergence times can be matched with the assumed timeline associated with the fossil record. In other words, just tweak the numbers until you get the answer you want (Creation Science Association of Alberta 2023).

Last year, when I started researching tardigrades for the blurb I attached to the crocheted ones I had made, I also found some interesting information about molecular clocks. Evolutionists have tried to use molecular clocks to estimate when tardigrades split from the other panarthropod phyla. Panarthropods are a proposed classification including arthropods, tardigrades, velvet worms, and an extinct group of legged

by
Andrea
Reitan



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How Science Affects Free Speech



The objective of education, in general, is to equip upcoming generations to understand their place in society and how to contribute in a meaningful way to the well-being of that society. Christians go further. Each generation seeks to communicate with youngsters our relationship to God, and our relationship to people and the world in which we live. Christians therefore declare that an important part of our mandate as citizens and believers, is to make sure that we are informed about current events and issues such as science which can exert such a dramatic impact on society, especially today. Indeed, few issues today have fashioned the values of society as much as has scientific thinking and the philosophical implications thereof.

It was 75 years ago that a United Nations sponsored universal declaration of human rights was signed by fifty countries. One article (# 27) apparently enshrined the enjoyment of science as a fundamental right, a ‘universal value’ of all peoples. At that time, of course, science

was seen as providing practical benefits and new technology to peoples of the world. Few would object to such an agenda. But that was then, and a lot of water has since gone under the bridge.

Most scientists today insist that scientific explanations involve only matter and processes. This means that scientists explain how nature operates and came about only in terms which exclude God. As a result, as per evolution theory, mankind is considered only one kind of organism among many which are all equally valuable. It is the group of organisms, especially successful specimens, not individual people who are important to society. Christians alternatively consider that each individual human life is to be valued and protected. Since the 1960s, scientific attitudes have had an increasingly greater impact on government policies.

The climate change agenda for example, places the interests of people and nation states as inferior to the interests the scientists consider that exist for the entire globe. Consider, for example, the protests of farmers in the European Union. The people setting the policy initiatives did not ask the farmers for advice. For example, the European Commission in its recommendations for climate targets for 2040, “rightly based its target on the consensus of scientific advice.” (Editorial. *Nature*. February 15, 2024.) Yet the affected farmers and people in general have a great vested interest in what these policies are.

So what does this mean for the average Christian? Life has so far continued OK, so what is there to worry about? Actually plenty. It is the scientists’ agenda that we need to be aware of. For example, in December 14, 2023 an article declared in the journal Nature concerning worldwide climate change policies: “The governance systems we have today are not well suited to [the problem of dealing with climate change].” (Dec. 14, 2023 p. 234). So

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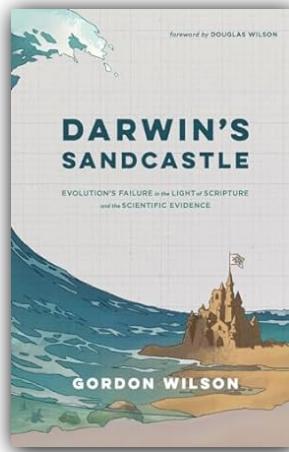
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Basic Ammunition in the World of Ideas

Dr. Gordon Wilson has written a nice new book, *Darwin's Sandcastle*, for Christians who are not scientists but who desire to be informed, but not burdened with details concerning science and origins. Such people understand that they need to keep mentally alert concerning their worldview. This means not shutting themselves off from important topics like the foundations of Christian doctrine and history. The objective of many Christians therefore is to share their worldview with others and not become bowled over by contrary views. While most people do not specialize in science, they can at least familiarize themselves with the basic issues.



tion. The longest chapter, and one of the most interesting, with most illustrations, is on the fossil record (testimony of the entombed).

The discussion begins with a discussion of the foundational importance of Genesis 1-11. In succeeding chapters Dr. Wilson discusses whether long age interpretations of Genesis are in fact true to what is written there. The next chapter shares with us the difficulties encountered in radiometric dating. Next we hear about how mutations and natural selection cannot explain where the information in new designs of creature came from, if not from the Creator. After the chapter on the fossil record, research on "pre-human" fossils is reviewed. An expose on the difficulties encountered in origin of life research, is totally fun. This discussion morphs beautifully into the testimony for design in molecular machines.

Later Dr. Wilson turns his attention to created kinds, but he is somewhat ambivalent on this topic compared to some other influential creation apologists. Feeling really brave, he then discusses the issue of how predators and disease agents acquired their characteristics. This too apparently is controversial, but it is interesting to read what the various positions are. He briefly describes some other non-core issues like plate tectonics and geographic distribution of organisms after the flood. Finally, he discusses major divisions and antagonisms that exist within the

community of creation apologists. Obviously, the situation needs to be resolved with different factions showing a gracious respect for each other.

Dr. Wilson's book displays independence of thought compared to some other general books on origins. He however knows and cooperates with many creationists and he has had lots of experience teaching and sharing details of the Creation. His writing style is informal, which make the discussion easier to follow for the general interest reader. This is an up-to-date fun overview of young earth science which all will find helpful, especially when they discuss such issues with others.

Gordon Wilson. 2023. *Darwin's Sandcastle*. Roman Roads Press. pp. 222. Paper. Line drawings.



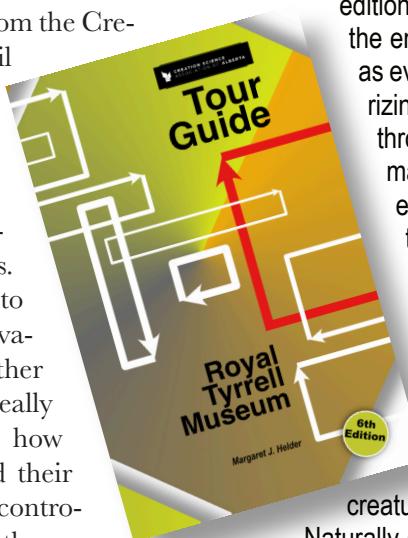
6th Edition Tour Guide Published

A bold new cover, directional highlights in colour and the same user friendly coil format, make this new guide to the Royal Tyrrell Museum appealing to visitors to the museum.

In that almost half of the museum is now devoted to arguments for evolution (rather than actual displays of fossils), this new edition of the guide provides some new features. Firstly, at the end of small paragraphs discussing each issue (such as evidences for evolution), the guide provides a summarizing statement in italics. You don't have to plough through all the verbiage to get the idea! Also, since many specific kinds of fossil are now displayed in several distant places in the museum, page numbers in the guide are provided so that that one can access the remarks concerning presentations elsewhere.

An entirely new feature is the use of the Head-Start resource online to provide more detailed discussion of some related and important issues such as origin of life arguments, and evolution related topics like the geological column, rock record, fossils (what are they?), extinct Alberta creatures (mostly marine reptiles) and dinosaurs.

Naturally one can only absorb limited amounts of information as one proceeds through the museum. However, the guide also serves as a briefing tool both before visiting and after leaving the museum. This booklet is a resource that keeps stimulating and informing readers!



marine worms called “Lobopodia”. For example, an experiment by Regier, et al. began by assuming all life came from a single common ancestor in the ancient past and the panarthropod phyla diverged from each other shortly after the Cambrian Explosion. Their genetic analysis confirmed relationships within the tardigrade kind but failed to definitively connect it to the other two phyla (Regier, et al. 2004). In the Young-Earth Creationist model, this is expected because tardigrades are a created kind, as are the different families of arthropods and velvet worms.

To explain this finding, the study authors suggest that the rate of change appears to be faster in tardigrades than in the other two phyla but also say, “Of course, these time estimates are no better than the method used for inference, and there is considerable controversy over the accuracy of molecular dating methods” (Regier, et al. 2004). It sounds a bit like an admission that their study failed to give them the answer they wanted but they are holding onto their evolutionary assumptions anyway.

Mapalo, et al. also tried to build a tardigrade family tree using both fossilized and living tardigrade species. Because DNA is not available from fossils, a genetic analysis could not be done on them, so the authors used differences in body surface, claws, mouth and throat, and egg morphology. The divergence times of fossilized tardigrades are based on the evolutionary dates applied to the rocks in which they were found (Mapalo, et al. 2021). This assumes that the mutation rate can be estimated based on visible traits and that visible traits are coded by the same genes in each species.

In using molecular clocks to estimate divergence times of living species, the analysis is often based on specific genes, which are cherry-picked for the purpose, not on whole-genome comparisons (Regier, et al. 2004). One of the problems with this method is that analyses of different sets of genes produce different evolutionary trees.

Another molecular clock analysis produced an estimated date of origin for tardigrades during the Precambrian. The study’s purpose was to try to find a plausible scenario for the origin of an Antarctic tardigrade species. Again, the au-

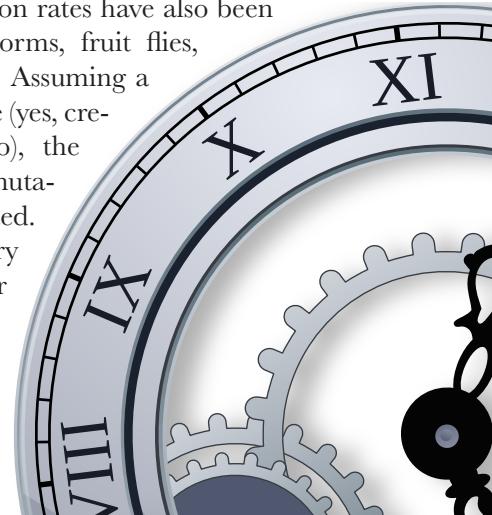
thors started with evolutionary assumptions and millions of years. Some of the date estimates for some species’ divergences have ranges of hundreds of millions of years, showing how imprecise and inaccurate such estimates may be in reality. The authors of the study try to explain this by saying that “the fast-evolving nature of tardigrade genes may have complicated the correct estimation of their divergence” (Guidetti, et al. 2017). Maybe a better explanation is that the long-age assumptions are wrong.

Having said all that, molecular clocks can still be a useful tool for creationists. In

Replacing Darwin: The New Origin of Species, Dr. Nathaniel Jeanson presents his research using a molecular clock in the mitochondrial DNA (mtDNA). Mitochondria are often referred to as the “powerhouses of the cell” because they produce energy in the form of ATP which powers other cellular processes. Mitochondria have their own piece of DNA separate from the chromo-

somes in the cell nucleus, and it is passed down from mother to offspring. This piece of DNA is much smaller than the nuclear DNA, so it can be easier to work with in genetic studies. In some cases, such as in humans, the mutation rate is known, providing a guideline for the starting assumptions. One of the amazing discoveries in studying human mtDNA is that human ancestry can be traced back in a graph showing three nodes believed to represent the wives of Noah’s three sons (Jeanson, 167-206).

The book also presents a comparison of the number of differences within created kinds predicted by both the evolutionary timescale and a 6000-year timescale. Besides humans, mtDNA mutation rates have also been measured in roundworms, fruit flies, water fleas, and yeast. Assuming a constant mutation rate (yes, creationists do that, too), the number of expected mutations can be estimated. The evolutionary timescale predicts far too many mutations. The most accurate



estimate (for water fleas) was almost five times more than the actual differences. The evolutionary estimates for the other three were about 20 to 100 times higher (Jeanson, 167-206)!

However, it was also found that a 6000-year timescale predicts too few differences between the genomes of different species of the same created kind. This means that DNA mutations can only explain a fraction of the differences between species. Dr. Jeanson believes that this may show that the original created kinds (and the animals that survived the Flood) already had pre-designed differences in their genomes (Jeanson, 207-232), and this would mean that, rather than the male and female of the same kind having the same DNA except for the sexual differences, they may have been created in such a way that they each had different versions of genes for their various traits—possibly a total of four variations of each gene—leading to the wondrous variety we see among species today. Further analysis has shown that our modern species could easily have arisen in the 4500 years since the Flood (Jeanson, 247-280).

Dr. Jeanson has continued his research since publishing *Replacing Darwin*. He also produced a book called *Traced: Human DNA's Big Surprise*. This book focuses on his research into the human Y chromosome, which can also be used as a molecular clock. While mtDNA is passed down from mother to offspring and only has one change every few generations, the Y chromosome is only passed down from father to son and generally has about three changes per generation. It is the chromosome that decides the gender of the offspring.

The surprise he found was that by assuming a 6000-year history for the human race, he could correlate changes that occurred in populations with major historical events, such as the Mongolian conquest and European exploration and colonization. Several playlists are available on YouTube regarding Dr. Jeanson's past and ongoing research:

► The New History of the Human Race <https://www.youtube.com/playlist?list=PL1v9pq54w1mwr-GICET76Rs99Fx0EjXJE4>

► Traced: Human DNA's Big Surprise with Dr. Nathaniel Jeanson <https://www.youtube.com/playlist?list=PL1v9pq54w1mzxNSlpFs-QmE-cAFm12398>

► Lost History of North America <https://www.youtube.com/playlist?list=PL1v9pq54w1mzCLWAyzc3Kzvw0RQPmq>

We can conclude from all of this that molecular clock analysis is another scientific tool based on unproven assumptions, but it is still a useful tool. Evolutionists use molecular clocks to try to confirm their long-age hypotheses and build an evolutionary tree with one common ancestor for everything. This generally does not work because their starting assumptions are wrong. Creationists, however, can also use this tool to confirm hypotheses and create family trees for the different created kinds, showing that life on Earth has not been here as long as evolutionists think



and that there is an “orchard” of life with multiple “trees.” As we discover more ways to study God’s creations, we have to remember not to deny the usefulness of the tools He gives us and to always give Him the glory.

References

Creation Science Association of Alberta. 2023. *Investigate Further: Molecular Clock*. Accessed June 7, 2023. <https://headstart.create.ab.ca/term/molecular-clock>.

Guidetti, Roberto, Sandra J. McInnes, Michele Cesari, Lorena Rebecchi, and Omar Rota-Stabelli. 2017. "Evolutionary scenarios for the origin of an Antarctic tardigrade species based on molecular clock analyses and biogeographic data." *Contributions to Zoology* 86 (2): 97-110. Accessed February 14, 2023. https://brill.com/view/journals/ctoz/86/2/article-p97_1.xml?language=en.

Jeanson, Nathaniel T. 2017. *Replacing Darwin: The New Origin of Species*. Green Forest, AR: Master Books.

Mapalo, Marc. A, Ninon Robin, Brendon E. Boudinot, Javier Ortega-Hernandez, and Phillip Barden. 2021. "A tardigrade in Dominican amber." *Proceedings of the Royal Society B*. doi:<https://doi.org/10.1098/rspb.2021.1760>.

Regier, Jerome C., Jeffrey W. Shultz, Robert E. Kambic, and Diane R. Nelson. 2004. "Robust Support for Tardigrade Clades and Their Ages from Three Protein-Coding Nuclear Genes." *Invertebrate Biology* 123 (2): 93-100. Accessed February 23, 2023. <https://www.jstor.org/stable/3227267>.



those individuals which were better endowed, would be the ones to leave more offspring. This was the simple story that Darwin developed to explain evolution. There were many people who did not think that this scenario of changing proportions of traits in the population could explain the appearance of new body plans. The process might explain why there were more big or small individuals (or whatever) in the population, but it could not explain the appearance of new body plans (such as insect or fish) which require a lot of new information compared to that found in other kinds of creature. **But no matter, Darwin's scenario became the basis for evolution theory in the years to come.**

Later, biologists became aware of genes, distinct characteristics, which could be inherited in predictable proportions in the offspring. To accommodate this new idea to Darwin's story, population biologists studied groups of individuals to discover how fast populations could undergo major shifts in characteristics. This was still Darwin's basic story, only biologists now explained it in terms of genes and whole populations. **They still did not know, if evolution were true, how the information for new body plans could develop.**

Then along came Watson and Crick in 1953 with a description of the structure of DNA. Soon biochemists realized that the order of

component "letters" or nucleotides making up the DNA strand, was the feature which determined the structure of proteins which are so important to life processes. Genes were now understood in terms of nucleotide sequences. Biologists thought that the genome [totality of DNA present] carried all the information necessary to make an organism. So now Darwin's story needed to accommodate the make-up of genes in the DNA. These sequences obviously required huge amounts of information to assemble and manage their functions, **but Darwin's story could not explain where this information came from, if evolution were true.**

Initially biologists expected that the human genome would include about 100,000 genes. Imagine their surprise when the human genome study was completed (in the year 2000), and they found that there were only about 20,000 protein coding genes. What was the other 98% of the DNA doing?

Another interesting discovery from the Human Genome Project was that genes were not discrete units of letters/nucleotides. In a given stretch of DNA, there could be readings that overlap part of adjacent genes, and numerous stretches of nucleotides were edited out of copies before being read for protein structure, with some more or fewer edits used to produce different proteins from the

same basic strand of letters. Also, some proteins even are derived by reading a sequence backwards. Obviously, the picture became a lot more complicated **but explanations, if evolution were true, for why the cell worked this way, were not forthcoming.**

Then in 2012, the results of the ENCODE international study suggested that most of the 98% non-protein coding sections of DNA were involved in organization and regulation of the workings of the cell. Still there were no insights into where the information to organize all these details came from. **But it made biologists more aware that they do not know what a gene actually is.** For sure it is not a discrete collection of nucleotides all strung in a row.

Up to this point, biologists considered that the genome, or collection of DNA letters in an organism, represented the blueprint for life of that creature. A blueprint is the plan for what an organism looks like and how its body works to allow for the processes of life. However early in 2024, a new book was published entitled *How Life Works: a User's Guide to the New Biology*. The message of the book was so dramatic that Denis Noble, retired professor of physiology and biology from Oxford University, almost immediately wrote a review which was shortly published in *Nature* (Feb. 8, 2024 pp. 254-255). The title of his review is "Genes are not the blueprint for life."

In his article, Dr. Noble declares that "agency and purpose", or in other words information and intelligence are the factors that control what each organism is like. He thus insists "agency and purpose are definitive characteristics of life that have been overlooked in conventional gene-centric views of biology." (p. 255) Dr. Noble quotes the book's author Philip Ball "we are at the begin-



“agency and purpose” can only come from God”



ning of a profound rethinking of how life works.” Casey Luskin, in a commentary on Denis Noble’s article, likewise suggests that Dr. Nobel is telling us that life is “far more interesting and wonderful” than biologists have considered to this point. <https://evolutionnews.org/2024/02/denis-noble-in-nature-time-to-admit-genes>

Darwin’s story, so far, then brings us to mainstream biologists who are realizing that scientific explanations to this point, have not been able to explain where the design of living

organisms came from. Creationists, on the other hand, reply that **when it comes to life, “agency and purpose” can only come from God.** A partial realization by mainstream scientists that agency and purpose (marks of intelligence) are needed to explain life, is a big step forward. This makes 2024 a most remarkable year in biology. As Dr. Noble declares: “It’s time to stop pretending that, give or take a few bits and pieces, we know how life works.” Creationists have always made this clear. This is indeed a fitting rest of the story, so far.

How Science Affects Free Speech

what are the “governance systems” of today that are so problematic. A little investigation reveals that many scientists do not like democracy or a system that pays at least some attention to the interests of its citizens. Many scientists support top-down governance, choices made by an elite group on behalf of the governed citizens who have little choice in the matter.

About the same time, another article in Nature demonstrated what a “sustainable” world would look like. Sustainable means that the interests of nature take priority over those of people. Four values would determine policy: biocapacity (protecting the planet), fairness (a more equal society), well-being for all (basic services and rights) and an “active” democracy. This democracy would be very different from our present systems of government and sounds like the French revolution: “citizen assemblies could be set up with mandates to formulate socially acceptable sufficiency strategies and strengthen policies. These would be based on ecological limits, fairness and well-being for all, and include a stronger role for trade unions. Examples include local-needs forums, climate conventions and participatory budgeting.” (December 21/28, 2023 p. 521)

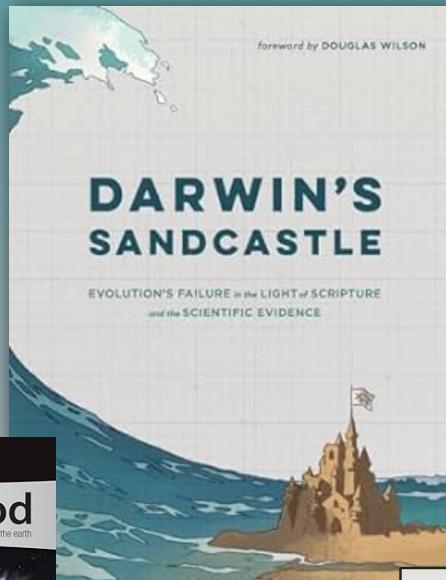
The journal Nature followed this up in the new year (January 11, 2024) with a discussion of what democracy should look like today: “Vigorous debate and argument ahead of elections is foundational to democratic societies.” (p. 215). The editorial then goes on to advocate how to squash such debate! This includes vigorous deprioritizing [burying] of opinions and publications which disagree with the establishment position. The idea behind “deprioritizing” is to design search algorithms online in such a way that opinions contrary to the majority scientific position are buried so deeply in the list of articles that inquirers rarely find them. The editorial further

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declares that there are other practices that can make hiding arguments even more effective. “There can be additional approaches to preventing people from falling into data voids of misinformation and disinformation...” [When a group does not like some arguments, they label them misinformation and disinformation.] Thus, scientists seek to protect the public from arguments contrary to the majority scientific position.

So how does this situation impact Christians? For a start, as we have seen, evolution theory holds that humans are unimportant compared to nature as a whole. Also, science in general denies that God has any role in nature or in man’s affairs. Obviously, the ability of Christians to share contrary positions and the gospel will be severely restricted. There are many aspects of social policy that are based on evolution theory. It is the duty of Christians to inform themselves concerning these issues and to express their position on as many occasions as possible. Times may be tough but we can still read, write and speak! We can still communicate with neighbours and friends. In all of this, we are called upon to communicate graciously and be the salt of the earth.



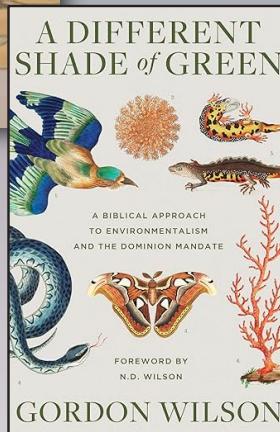


Pocket Guide to the Global Flood

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A Different Shade of Green

Gordon Wilson

In this recent book, written for the concerned Christian, Dr. Wilson seeks to discuss how God's world works, our place in it, and how to assume leadership and dominion in the world. Written in friendly persuasive fashion, this book is enjoyable and inspirational.

Paper/
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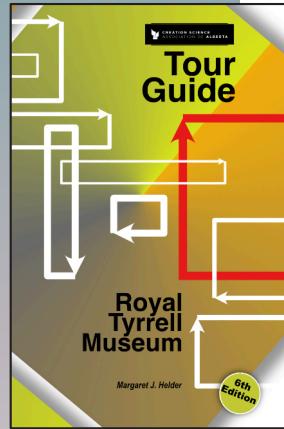
Darwin's Sandcastle

Gordon Wilson

This new book provides a positive discussion of the young earth position. Written for people who do not specialize in science, but who seek to familiarize themselves with the basic issues. This is an up-to-date fun overview of young earth science which will be most helpful in dealing with creation/evolution discussions.

Paper/line drawings/pp. 222

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Tour Guide: Royal Tyrrell Museum (6th edition)

Margaret Helder

This user-friendly booklet highlights interesting details and fascinating insights to the displays in the museum. The participatory new section, encountered first in the museum, packages flawed arguments for evolution. But you have answers at your fingertips in this booklet. And the dinosaur displays are all discussed later.

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